2010 MELCOR Users' Workshop

Preliminary Agenda

Bethesda, MD, September 13, 2010

September 13– Monday - Beginning at 8:30 am

Registration begins at 8:00 am and sessions begin at 8:30 am. Most sessions will provide user exercises and laptops will be provided for use during this workshop. Participants using their own laptops will need their laptops set up prior to 9:00 am. This workshop is an introductory and advanced user workshop, though it will focus on the Radionuclide (RN) package, only.

1 Introduction to MELCOR and the RN package ....Humphries

This session will provide an introduction to MELCOR with particular emphasis on the modeling of aerosols and radionuclides in the RadioNuclide (RN) package.

2 RN package input records ....Phillips, Jun

MELGEN and MELCOR input for RadioNuclide modeling. In addition, we will demonstrate the SNAP interface for working with input.

3 Adding a new class for Cs_2MoO_4...Humphries

Results of Phebus experiments have demonstrated the importance of modeling speciation of Cesium as Cs_2MoO_4. This session will walk the user through the steps of adding a new RN class including prepopulation of initial inventories, RN/VANESA class mapping, decay heat curves, fuel release, etc.

4 RN Physics ....Cole

This session will provide more in-depth understanding of a few within-volume models in the MELCOR RN1 package. In particular, aerosol physics, condensation and evaporation involving aerosols and surfaces, the hygroscopic model, and CVH "fog" models will be discussed. We will be using new tools for visualizing the effects of models and assessing the separate effects from different models.

5 HTGR Modeling   Young

New HTGR modeling capabilities require additional capabilities for modeling radionuclides and aerosols in MELCOR. Topics to be discussed include accelerated steady state, future code development for liftoff, release models, turbulent deposition for pipes, impact models, fission product absorption on dust, and implementing ORIGEN inventories into MELCOR.